SYNOPSIS Severn Trent Water Ltd (STW) sought an updated approach to reservoir portfolio risk and undertook a Portfolio-wide Risk Assessment (PRA) during 2010 and 2011.

The PRA was planned in two phases. Phase 1 encompassed data-gathering, interviews and screening, while Phase 2 was to include a more in-depth, quantitative approach. Recognising that the cost of a full quantitative assessment would need to be justified, a pragmatic approach was utilised, and quantitative assessment only considered necessary where it would add value.

The PRA revealed a strong awareness of risk within STW with a proactive approach to dealing with reservoir safety concerns. While the reservoir portfolio contains some older and inherently more risky structures, the review demonstrated that portfolio risk is being well managed. As a result, the outputs from Phase 1 were sufficient for determining asset risk rankings to allow for investment prioritisation.

STW plans for the PRA to be an ongoing process. Recommendations included methodology development with actions implemented to prepare for periodic PRAs appreciating that they are likely to be increasingly quantitative in the future.

Due to the forthcoming changes in reservoir legislation, the study has been extended to include non-statutory reservoirs and sludge lagoons. This process included: (i) a review of all known STW reservoirs; (ii) site visits by an inspecting engineer; and (iii) preliminary inundation mapping. This will enable planning, investment and risk reduction measures to be implemented before the legislation comes into effect.